

# Siemens PLM Connection

**Living Documents**

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2008

**Siemens  
PLM Connection**



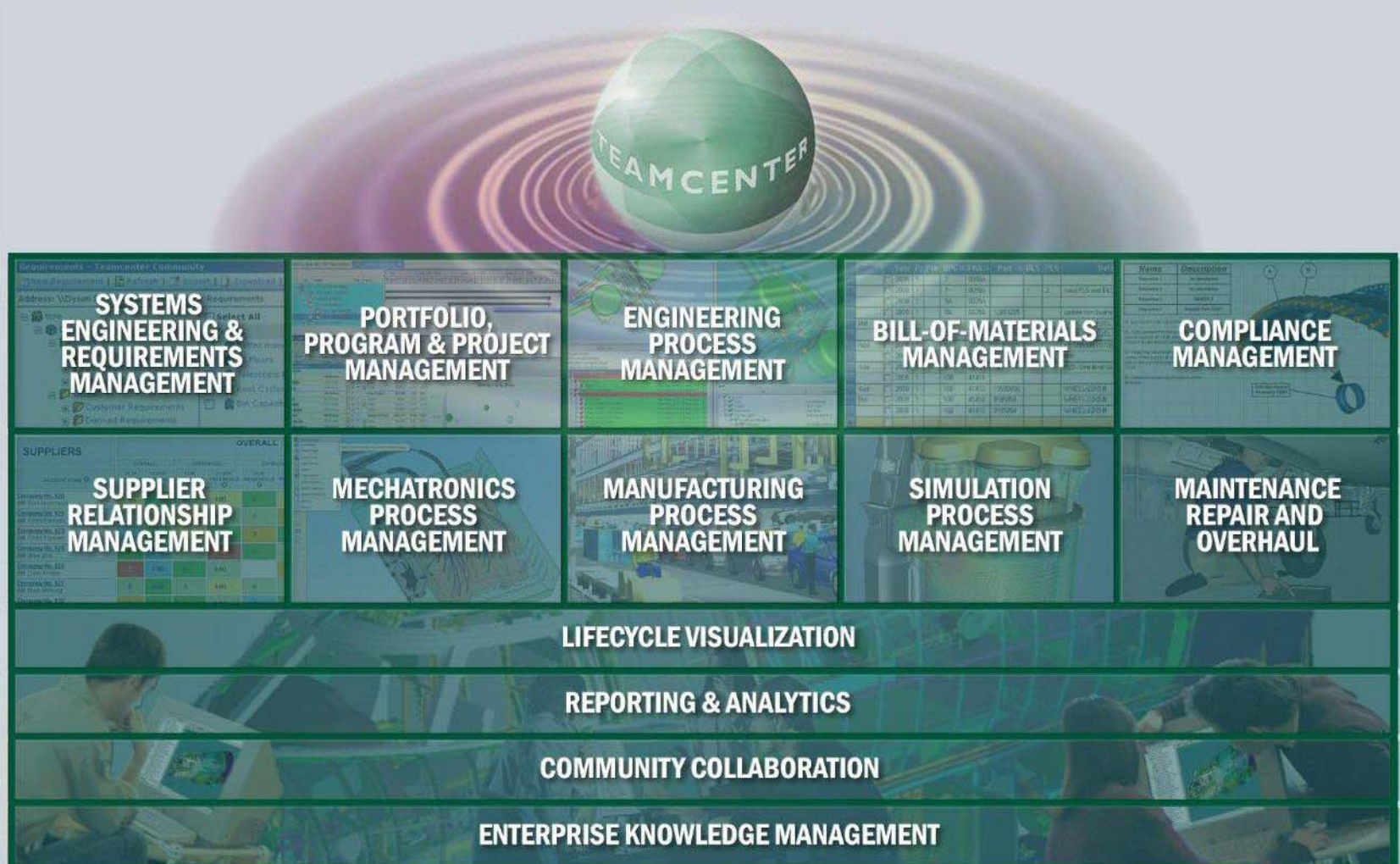
Americas 2008

**PLM Software**

Answers for industry.

**SIEMENS**

# Teamcenter Digital Lifecycle Management Solutions



## Living Documents

### Agenda

- Overview document generation features available in Teamcenter's Requirement Management
- Trends in document generation
- Living documents
  - What are they?
  - Template concepts
    - Object Template
    - Specification Template
    - "Live" Documents



# Overview Requirement Management features in Teamcenter 2007.x



## Users can...

- **Import** a Specification document (authored in Microsoft Word) into Teamcenter and create a structure of Requirements
- **View** the rich content of each Requirement
- **Edit and save** the rich content of Requirement
- **Create** new Requirements
- **Restructure** the Specification hierarchy
- **Export** the content of a Specification back to Microsoft Word

## Requirements Management – Welcome Panel

**Requirements Manager - Teamcenter 8**

File Edit Insert View Tools Window Debug Help

Back - Requirements Manager ( infodba (infodba) - dba/DBA [tc2008ms1] )

Getting Started My Teamcenter Requirements Manager

Enter Item ID to Search

**Quick Links** Customize

- Home
- My Worklist
- My Saved Searches
- My Links

**Open Items**

**History**

- 000138-scope
- 000252-Aliena
- 000137-test
- REQ-000071/A;1-rr1
- 000122/A;1-mypara

View All

**Favorites** Organize

Getting Started

My Teamcenter

DPV-deactivation

PSE

Schedule Manager

**Requirements Manager**

Welcome to Requirements Manager - Here you can create and organize your Requirements and link them to other Requirements or Items using trace links.

To begin, you can:

- Import a specification
- Create a specification

**Most recently opened specifications:**

- scope

Search: Enter Item ID to Search



## Import Specification – Choose File

The screenshot displays the Siemens Teamcenter Requirements Manager application. The main window shows a sidebar with navigation options like 'Quick Links' and 'Open Items'. The central area contains a 'Requirements Manager' section with instructions and links to 'Import a specification' and 'Create a specification'. An 'Import Spec' dialog box is open, showing a 'Steps' list with 'Enter Information for' and 'Select Import Options'. The 'File name' field is highlighted, and a speech bubble indicates that users can choose a Microsoft Word 2007 file. The 'Description' field contains the text 'Importing Turbo Charger Specification'. The dialog box has 'Back', 'Next', 'Finish', 'Home', and 'Close' buttons at the bottom.

Requirements Manager - Teamcenter 8

File Edit View Tools Window Debug Help

Back Requirements Manager (hegl(hegl) - dba/DBA [tc2008ms1]) My Teamcenter

Enter Item ID to Search

Quick Links Customize

- Home
- My Worklist
- My Saved Searches
- My Links

Open Items

History

- 000521-simple\_test
- 000372-PiperCherokee
- 000346-Aliena

Favorites Organize

- Getting Started
- My Teamcenter
- DPV-deactivation
- PSE
- Schedule Manager
- CAE SE
- Validation
- StructureMap Builder

Requirements Manager

Welcome to Requirements Manager - Here you can create and organize your Requirements and link them to other Requirements or Items using trace links.

To begin, you can:

- Import a specification
- Create a specification

Most recently opened specifications:

- simple\_test

Search: Enter Item ID to Search

Import Spec

Steps

- Enter Information for
- Select Import Options

Enter the basic information for the Import Spec

File name: ants and Settings\hegl\Desktop\Turbo Charger Specification.docx

Description: Importing Turbo Charger Specification

Back Next Finish Home Close

38M of 48M

start

2 W In... 4 I... 2 M... Edi... 2 M... 4 W... 7 D... 2 G... Wi... 2 J... Mi... 3:14 PM

# Import Specification – Choose Subtype

The screenshot displays the Siemens Teamcenter Requirements Manager interface. The main window shows the 'Requirements Manager' section with a search bar and a list of open items. A dialog box titled 'Import Spec' is open, showing the 'Steps' pane with 'Enter Information for Import' and 'Select Import Options'. The 'Select Import Options' pane has two radio buttons: 'Import as single subtype' (selected) and 'Use keywords for import'. The 'Import as single subtype' option has a dropdown menu set to 'Requirement'. The 'Use keywords for import' option has a text field for 'Keywords' and a dropdown menu set to 'Requirement'. A speech bubble points to the 'Requirement' dropdown in the 'Import as single subtype' section, containing the text: 'Users choose Subtype of objects to be created'. The bottom status bar shows 'Ready' and '39M of 48M'.

Requirements Manager - Teamcenter 8

File Edit View Tools Window Debug Help

Back Requirements Manager (hegl (hegl) - dba/DBA [tc2008ms1]) My Teamcenter

Enter Item ID to Search

Quick Links Customize

- Home
- My Worklist
- My Saved Searches
- My Links

Open Items

History

- 000521-simple\_test
- 000372-PiperCherokee
- 000346-Aliena

Favorites Organize

- Getting Started
- My Teamcenter
- DPV-deactivation
- PSE
- Schedule Manager
- CAE SE
- Validation
- StructureMap Builder

Requirements Manager

Welcome to Requirements Manager - Here you can create and organize your Requirements and link them to other Requirements or Items using trace links.

To begin, you can:

- Import a specification
- Create a specification

Most recently opened specifications:

- simple\_test

Search: Enter Item ID to Search

Import Spec

Steps

- Enter Information for Import
- Select Import Options

Select subtype or enter keywords for import

Import as single subtype Requirement

Use keywords for import

Keywords: Requirement

Back Next Finish Home Close

Ready 39M of 48M

# Import Specification – Import Complete

Requirements Manager - Teamcenter 8

File Edit View Tools Window Debug Help

Back Requirements Manager (hegi (hegi) - dba/DBA [tc2008ms1])

Getting Started Requirements Manager My Teamcenter

Enter Item ID to Search

Quick Links Customize

- Home
- My Worklist
- My Saved Searches
- My Links

Open Items

- 000522-Turbo Charger Specification

History

- 000521-simple\_test
- 000372-PiperCherokee
- 000346-Aliena

Favorites Organize

- Getting Started
- My Teamcenter
- DPV-deactivation
- PSE
- Schedule Manager
- CAE SE
- Validation
- StructureMap Builder

(000522-Turbo Charger Specification)

Latest Working Not Specified Not Specified

Root Structures 000522-view

| Item Structure                                   | Item Type       | Rule configured by | Item Rev Status | Find No. | Body Cleartext                              |
|--|-----------------|--------------------|-----------------|----------|---|
| 000522/A;1-Turbo Charger Specification (view)    | RequirementSpec |                    |                 |          |   |
| REQ-000788/A;1-Turbocharger Specification (view) | Requirement     | Working( )         |                 | 10       |   |
| REQ-000789/A;1-General (view)                    | Requirement     | Working( )         |                 | 10       |   |
| REQ-000790/A;1- Size                             | Requirement     | Working( )         |                 | 10       | The turbocharger shall fit within the bo... |
| REQ-000791/A;1- Configuration                    | Requirement     | Working( )         |                 | 20       | The turbocharger shall conform to the ...   |
| REQ-000792/A;1                                   | Requirement     | Working( )         |                 | 20       |   |
| REQ-000793/A;1-Performance (view)                | Requirement     | Working( )         |                 | 30       |   |
| REQ-000794/A;1- Seals                            | Requirement     | Working( )         |                 | 10       | The turbocharger shall have carbon seals.   |
| REQ-000795/A;1- Boost                            | Requirement     | Working( )         |                 | 20       | The turbocharger shall have a boost ran...  |
| REQ-000796/A;1- RPM                              | Requirement     | Working( )         |                 | 30       | The turbocharger shall be able to withs...  |
| REQ-000797/A;1- Efficiency                       | Requirement     | Working( )         |                 | 40       | The turbocharger shall have an overall u... |
| REQ-000798/A;1-Interfaces (view)                 | Requirement     | Working( )         |                 | 40       |   |
| REQ-000799/A;1- Mechanical                       | Requirement     | Working( )         |                 | 10       | The turbocharger mounting shall match...    |
| REQ-000800/A;1- Electrical (view)                | Requirement     | Working( )         |                 | 20       |   |
| REQ-000804/A;1- ECU Connection                   | Requirement     | Working( )         |                 | 30       | The connection between the ECU and ...      |
| REQ-000805/A;1- Addressing, Naming, and Initia   | Requirement     | Working( )         |                 | 40       | The turbocharger shall address the ECU...   |
| REQ-000806/A;1                                   | Requirement     | Working( )         |                 | 50       |   |



# View the Content in Embedded Microsoft Word

The screenshot displays the Siemens Teamcenter Requirements Manager interface. The left sidebar contains navigation elements: Quick Links (Home, My Worklist, My Saved Searches, My Links), Open Items (000522-Turbo Charger Specification), History (hegi (hegi) Inbox, perform-signoffs, 000011-r1, My Worklist, select-signoff-team), and Favorites (Getting Started, My Teamcenter, DPV-deactivation, PSE, Schedule Manager, CAE SE, Validation). The main area shows a hierarchical tree of requirements under the 'Item Structure' tab. The selected item is 'REQ-000791/A;1- Configuration'. The right pane shows the 'Configuration (Modified and Out)' tab with a 3D model of a turbocharger. A speech bubble points to the model with the text 'Users can browse the content'. Below the model, the text reads: 'The turbocharger shall conform to the general representation below:'.

Requirements Manager - Teamcenter 8

File Edit View Tools Window Debug Help

Back Requirements Manager (hegi (hegi) - dba/DBA [tc2008ms1])

Enter Item ID to Search

Quick Links Customize

- Home
- My Worklist
- My Saved Searches
- My Links

Open Items

- 000522-Turbo Charger Specification

History

- hegi (hegi) Inbox
- perform-signoffs
- 000011-r1
- My Worklist
- select-signoff-team

View All

Favorites Organize

- Getting Started
- My Teamcenter
- DPV-deactivation
- PSE
- Schedule Manager
- CAE SE
- Validation

Getting Started Requirements Manager

(000522-Turbo Charger Specification)

Latest Working Not Specified Not Specified

Item Structure

- 000522/A;1-Turbo Charger Specification (view)
  - REQ-000788/A;1-Turbocharger Specification (view)
    - REQ-000789/A;1-General (view)
      - REQ-000790/A;1- Size
      - REQ-000791/A;1- Configuration
      - REQ-000792/A;1
    - REQ-000793/A;1-Performance (view)
      - REQ-000794/A;1- Seals
      - REQ-000795/A;1- Boost
      - REQ-000796/A;1- RPM
      - REQ-000797/A;1- Efficiency
    - REQ-000798/A;1-Interfaces (view)
      - REQ-000799/A;1- Mechanical
      - REQ-000800/A;1- Electrical (view)
        - REQ-000801/A;1-Voltage
        - REQ-000802/A;1-Connections
        - REQ-000803/A;1- Communications
        - REQ-000804/A;1- ECU Connection
        - REQ-000805/A;1- Addressing, Naming, and Initia
        - REQ-000806/A;1

Properties TraceLink /Edit

Configuration (Modified and Out)

Root Structures 000522-view

Users can browse the content

The turbocharger shall conform to the general representation below:

# Edit Content using Embedded Microsoft Word editor

Selecting this button turns on the Microsoft Word tool bar

The screenshot displays the Siemens Teamcenter 8 Requirements Manager interface. The main window shows a tree view of requirements, with 'REQ-000791/A;1- Configuration' selected. The right pane shows the 'Configuration (Modified and Checked-out)' view. An embedded Microsoft Word editor is open, displaying the text 'The turbocharger shall conform to the general representation below:' followed by a 3D model of a turbocharger. The Word editor's ribbon is visible, showing the 'Home' tab with options for font, paragraph, and styles. A callout box points to the 'View/Edit' button in the top right corner of the Word editor, indicating that selecting this button turns on the Microsoft Word tool bar.

# Import Specification – Import by Keywords

The screenshot displays the Siemens Teamcenter Requirements Manager application. The main window shows a sidebar with navigation options like 'Quick Links' and 'Open Items'. The central pane displays the 'Requirements Manager' welcome screen with options to 'Import a specification' or 'Create a specification'. An 'Import Spec' dialog box is open, showing the 'Steps' section with 'Enter Information for Import' and 'Select Import Option'. The 'Select Import Option' section has two radio buttons: 'Import as single subtype' and 'Use keywords for import'. The 'Use keywords for import' option is selected. Below it, the 'Keywords' field contains 'turbocharger, All' and the 'Requirement' dropdown is set to 'Requirement'. A callout bubble points to the 'Use keywords for import' option with the text: 'Paragraphs containing keywords will become Requirements'. The bottom of the screen shows the Windows taskbar with various open applications and the system clock at 4:40 PM.

Requirements Manager - Teamcenter 8

File Edit View Tools Window Debug Help

Back - Requirements Manager (hegi (hegi) - dba/DBA [tc2008ms1])

Enter Item ID to Search

Quick Links Customize

- Home
- My Worklist
- My Saved Searches
- My Links

Open Items

History

- 000523-Turbo Charger Specification
- 000521-simple\_test
- 000372-PiperCherokee
- 000346-Aliena

Getting Started

My Teamcenter

DPV-deactivation

PSE

Schedule Manager

CAE SE

Validation

StructureMap Builder

Requirements Manager

Welcome to Requirements Manager - Here you can create and organize your Requirements and link them to other Requirements or Items using trace links.

To begin, you can:

- Import a specification
- Create a specification

Most recently opened specifications:

- Turbo Charger Specification
- Turbo Charger Specification

Search: Enter Item ID to Search

Import Spec

Steps

- Enter Information for Import
- Select Import Option

Select subtype or enter keywords for import

Import as single subtype Requirement

Use keywords for import

Keywords: turbocharger, All = Requirement

Enter a comma-separated list of keywords for import. The document will be parsed using the keywords to create requirements or paragraphs.

Back Next Finish Home Close

Ready 30M of 48M

start 4 Windo... 2 Micros... 3 Intern... 2 Micros... EditPlus [D... 3 Windo... 2 GroupV... 2 Java(T... 4:40 PM

# Import Specification – Import Complete

Requirements Manager - Teamcenter 8

File Edit View Tools Window Debug Help

Back - Requirements Manager (hegi (hegi) - dba/DBA [tc2008ms1])

Getting Started Requirements Manager

(000523-Turbo Charger Specification)

Latest Working Not Specified Not Specified

Root Structures 000523-view

| Item Structure                                 | Item Type       | Rule configured by | Item Re... | Find No. | Body Cleartext                                      |
|--|-----------------|--------------------|------------|----------|---|
| 000523/A;1-Turbo Charger Specification (view)  | RequirementSpec |                    |            |          |   |
| 000524/A;1-Turbocharger Specification (view)   | Paragraph       | Working( )         |            | 10       |   |
| 000525/A;1-General (view)                      | Paragraph       | Working( )         |            | 10       |   |
| REQ-000807/A;1- Size                           | Requirement     | Working( )         |            | 10       | The turbocharger shall fit within the bounding ...  |
| REQ-000808/A;1- Configuration                  | Requirement     | Working( )         |            | 20       | The turbocharger shall conform to the general ...   |
| REQ-000809/A;1                                 | Requirement     | Working( )         |            | 20       |   |
| 000526/A;1-Performance (view)                  | Paragraph       | Working( )         |            | 30       |   |
| REQ-000810/A;1- Seals                          | Requirement     | Working( )         |            | 10       | The turbocharger shall have carbon seals.           |
| REQ-000811/A;1- Boost                          | Requirement     | Working( )         |            | 20       | The turbocharger shall have a boost range > 1...    |
| REQ-000812/A;1- RPM                            | Requirement     | Working( )         |            | 30       | The turbocharger shall be able to withstand a ...   |
| REQ-000813/A;1- Efficiency                     | Requirement     | Working( )         |            | 40       | The turbocharger shall have an overall unit effi... |
| 000527/A;1-Interfaces (view)                   | Paragraph       | Working( )         |            | 40       |   |
| REQ-000814/A;1- Mechanical                     | Requirement     | Working( )         |            | 10       | The turbocharger mounting shall match the exi...    |
| 000528/A;1- Electrical (view)                  | Paragraph       | Working( )         |            | 20       |   |
| REQ-000815/A;1-Voltage                         | Requirement     | Working( )         |            | 10       | All of the sensors on the turbocharger shall be ... |
| REQ-000816/A;1-Connections                     | Requirement     | Working( )         |            | 20       | All connectors shall comply to SAE/USCAR-2 Re...    |
| REQ-000817/A;1- Communications                 | Requirement     | Working( )         |            | 30       | All data communications shall comply with ISO ...   |
| REQ-000818/A;1- ECU Connection                 | Requirement     | Working( )         |            | 30       | The connection between the ECU and the tur...       |
| REQ-000819/A;1- Addressing, Naming, and Initia | Requirement     | Working( )         |            | 40       | The turbocharger shall address the ECU per th...    |
| REQ-000820/A;1                                 | Requirement     | Working( )         |            | 50       |   |

Quick Links: Home, My Worklist, My Saved Searches, My Links

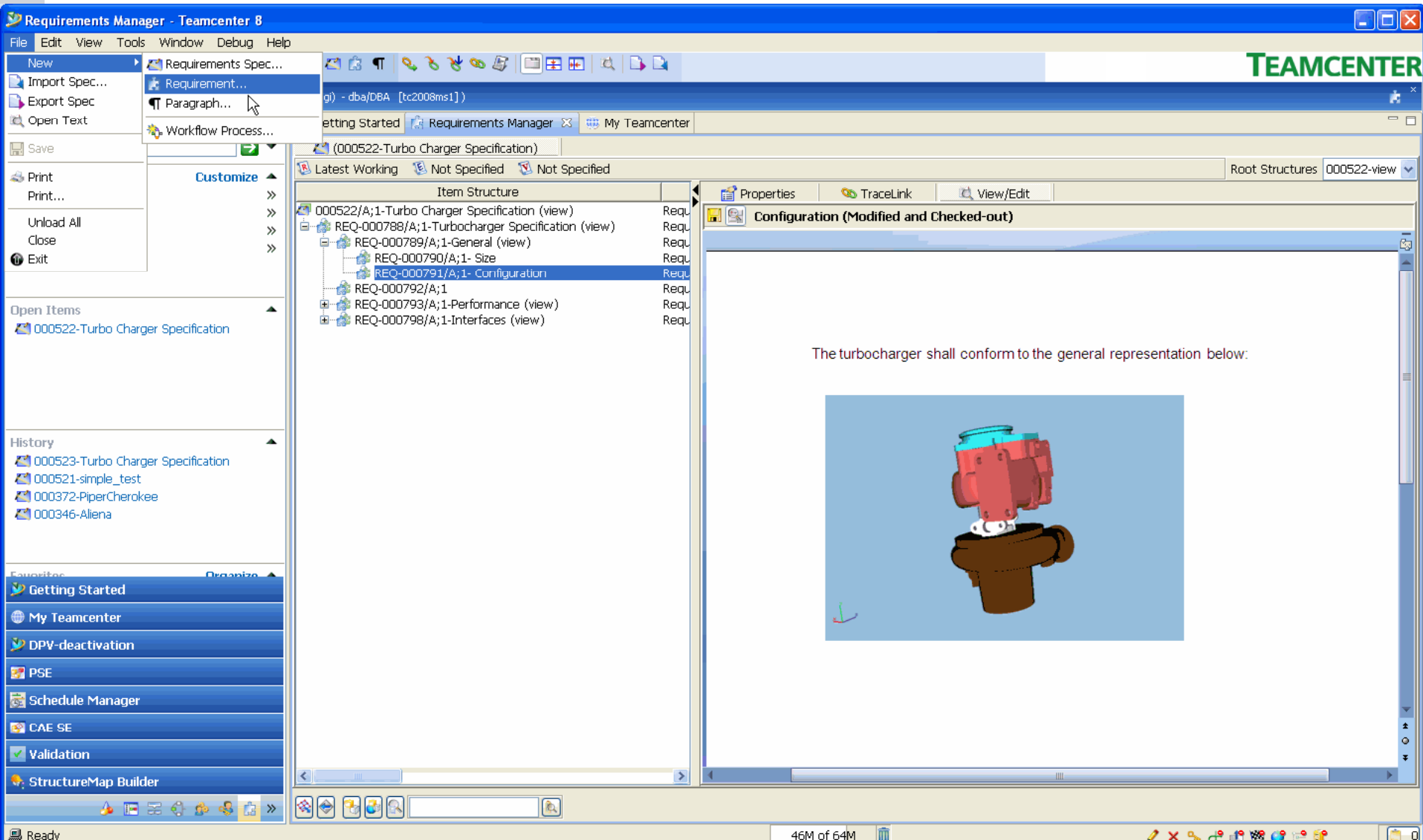
Open Items: 000523-Turbo Charger Specification

History: 000522-Turbo Charger Specification, hegi (hegi) Inbox, perform-signoffs, 000011-r1, My Worklist

Getting Started, My Teamcenter, DPV-deactivation, PSE, Schedule Manager, CAE SE, Validation, StructureMap Builder

Ready 34M of 49M

## Create New Requirement



## Create New Requirement – Enter Initial Content

The screenshot displays the Siemens Teamcenter Requirements Manager interface. The main window shows a project titled "000522-Turbo Charger Specification". The left sidebar contains a "Quick Links" section with options like Home, My Worklist, My Saved Searches, and My Links. Below this is an "Open Items" section showing the current project. The main area displays a tree view of the project structure, including "000522/A;1-Turbo Charger Specification (view)" and its sub-items. The right pane shows the "Configuration (Modified and Checked-out)" section.

A "New Requirement" dialog box is open in the foreground. It has a "Steps" section with "Select Requirement" and "Enter Requirement". The "Enter Requirement" step is active, showing the "Item Information" section. The "ItemID / Rev - Name" field is populated with "REQ-000821 / A - turbocharger". The "Initial Content" field contains the text "Initial content for turbocharger". The dialog box has "Back", "Next", "Finish", "Home", and "Close" buttons.

To the right of the dialog box, there is a 3D model of a turbocharger, which is a red and brown mechanical component. Below the model, the text reads: "The turbocharger shall conform to the general representation below:".



## Create New Requirement

The screenshot displays the Siemens Teamcenter Requirements Manager application. The interface is divided into several panes:

- Left Pane:** Contains a search bar with the value "000522", a "Quick Links" section with links like Home, My Worklist, and My Saved Searches, an "Open Items" section showing "000522-Turbo Charger Specification", and a "History" section listing previous specifications.
- Top Pane:** Shows the current project path: "(000522-Turbo Charger Specification)". Below this, there are tabs for "Latest Working", "Not Specified", and "Not Specified".
- Item Structure Pane:** A tree view showing the hierarchy of requirements. The selected item is "REQ-000821/A;1-turbocharger". Other items include "REQ-000788/A;1-Turbocharger Specification (view)", "REQ-000789/A;1-General (view)", "REQ-000790/A;1- Size", "REQ-000791/A;1- Configuration (view)", "REQ-000792/A;1", "REQ-000793/A;1-Performance (view)", and "REQ-000798/A;1-Interfaces (view)".
- Right Pane:** Displays the content of the selected requirement, titled "turbocharger (Modified and Checked-out)". The content area is currently empty, showing the text "Initial content for turbocharger".

The bottom status bar indicates the application is "Ready" and shows memory usage as "41M of 64M".

## Document Generation in RM – Export the Structure

The screenshot displays the Siemens Teamcenter Requirements Manager (RM) application window. The title bar reads "Requirements Manager - Teamcenter 8". The menu bar includes "File", "Edit", "View", "Tools", "Window", "Debug", and "Help". The "File" menu is open, showing options: "New", "Import Spec...", "Export Spec" (highlighted with a mouse cursor), "Open Text", "Save", "Print", "Print...", "Unload All", "Close", and "Exit".

The main workspace is divided into several panes:

- Left Pane:** Contains "Open Items" (listing "000522-Turbo Charger Specification") and "History" (listing "000523-Turbo Charger Specification", "000521-simple\_test", "000372-PiperCherokee", and "000346-Aliena").
- Top Center Pane:** Shows the "Item Structure" tree for "000522-Turbo Charger Specification". The tree includes:
  - 000522/A;1-Turbo Charger Specification (view)
  - REQ-000788/A;1-Turbocharger Specification (view)
  - REQ-000789/A;1-General (view)
  - REQ-000790/A;1- Size
  - REQ-000791/A;1- Configuration (view)
  - REQ-000821/A;1-turbocharger
  - REQ-000792/A;1
  - REQ-000793/A;1-Performance (view)
  - REQ-000798/A;1-Interfaces (view)
- Right Pane:** Displays the "General" properties for the selected item. The "Root Structures" dropdown is set to "000522-view".

The bottom status bar shows "Ready" and "47M of 64M". The Windows taskbar at the very bottom shows the Start button and several open applications, including "Win...", "Conver...", "4 Inte...", "4 Mic...", "EditPlus...", "3 Win...", "2 Gro...", "2 Jav...", and "Microso...". The system clock indicates "4:05 PM".

# Document Generation in RM – Exported Document

General (1).docx - Microsoft Word

Home Insert Page Layout References Mailings Review View Add-Ins

Clipboard Font Paragraph Styles Editing


1. General

1.1 Size

The turbocharger shall fit within the bounding volume:  
210mm L x 320mm W x 240 H

1.2 Configuration

The turbocharger shall conform to the general representation below:



1.2.1 turbocharger

Initial content for turbocharger

Page 1 of 1 | Word 2010

## Future Trends in Document Generation

Document generated from **current PLM systems** is either **printed or vaulted** in a data storage system

But the **underlying information changes** often

- This is primarily the case during the early stages of a product development where Requirements are analyzed and captured

Users often **view outdated information** and have no way to find out what the changes are until they regenerate the document

If users want to modify document, they have to **modify the data in the PLM system and regenerate the document** all over again

- This could be time consuming and error prone

## Challenges

- If we **modify the generated document**, the data has to be modified in database
- If we **modify the data in database**, we have to regenerate the document.
- Either way, this **can lead to inaccuracy of data, duplication of effort or both...**

**What we need is a “two way” communication from Microsoft Word and database**

## Living Documents - planned in Teamcenter 8

- Living Documents are “Live”
- Changes made in the Generated Document can be directly saved or “**pushed**” to Teamcenter
  - Property changes to Requirements can be saved from Microsoft Word to Teamcenter
  - Rich text modifications can be saved to Teamcenter
  - Changes to document structure can be saved to Teamcenter
  - Off line modifications can be merged later in Teamcenter
- Changes made in Teamcenter can be “**pulled**” from Microsoft Word



## Living Document Concepts

- **Object Template**
  - **Teamcenter** template object that defines how each object can be viewed in Microsoft Word
  - Defines what properties can be exported and how they are laid out for each paragraph in a document
- **Specification Template**
  - **Teamcenter** template object that defines how each Specification is structured (such as the Title page, Body of the document, Tables and Appendices)
- **Content Control**
  - **Microsoft Word 2007 concept** for individual controls that you can add and customize for use in templates, forms, and documents

## Object Template

- Template can be defined in Microsoft Word for each type of object
- This Template defines
  - What Properties of object to export
  - The format of each property
  - How these properties can be laid with in a paragraph
- Object Template will be **created and associated in BMIDE**
- Object Template will be **edited using Microsoft Word**

# Object Template Example

ObjectTemplate.docx - Microsoft Word

File Edit View Insert Format Tools Table Window Help

Type a question for help

Normal + (Latir) Univers 11 B I U

All Entries Font New...

1 2 3 4 5 6 7

{%object\_name}

| Property       | Value                |
|----------------|----------------------|
| Name           | {%object_name}       |
| Type           | {%object_type}       |
| Date Created   | {%creation_date}     |
| Due Date       | {%last_mod_date}     |
| Classification | {%ip_classification} |

{%Rule.selection.export.static}

Page 1 Sec 1 1/1 At 1" Ln 1 Col 1 REC TRK EXT OVR English (U.S.)

start

9:11 AM

# Sample Viewing of a Requirement

The Piper Cherokee.docx - Microsoft Word

Table Tools

Home Insert Page Layout References Mailings Review View Developer Design Layout

Paste Cut Copy Format Painter Clipboard

Font: Univers 11, Bold, Italic, Underline, Text Color, Background Color, Font Face, Font Size, Bold, Italic, Underline, Text Color, Background Color, Font Face, Font Size

Paragraph: Bulleted List, Numbered List, Decrease Indent, Increase Indent, Line and Paragraph Spacing, Paragraph Style, Paragraph Style, Paragraph Style, Paragraph Style

Styles: AaBbCc [Normal], AaBbCc [No Spacing], AaB [Title], AaBbCc [Subtitle], AaBbCc [Subtle Emphasis]

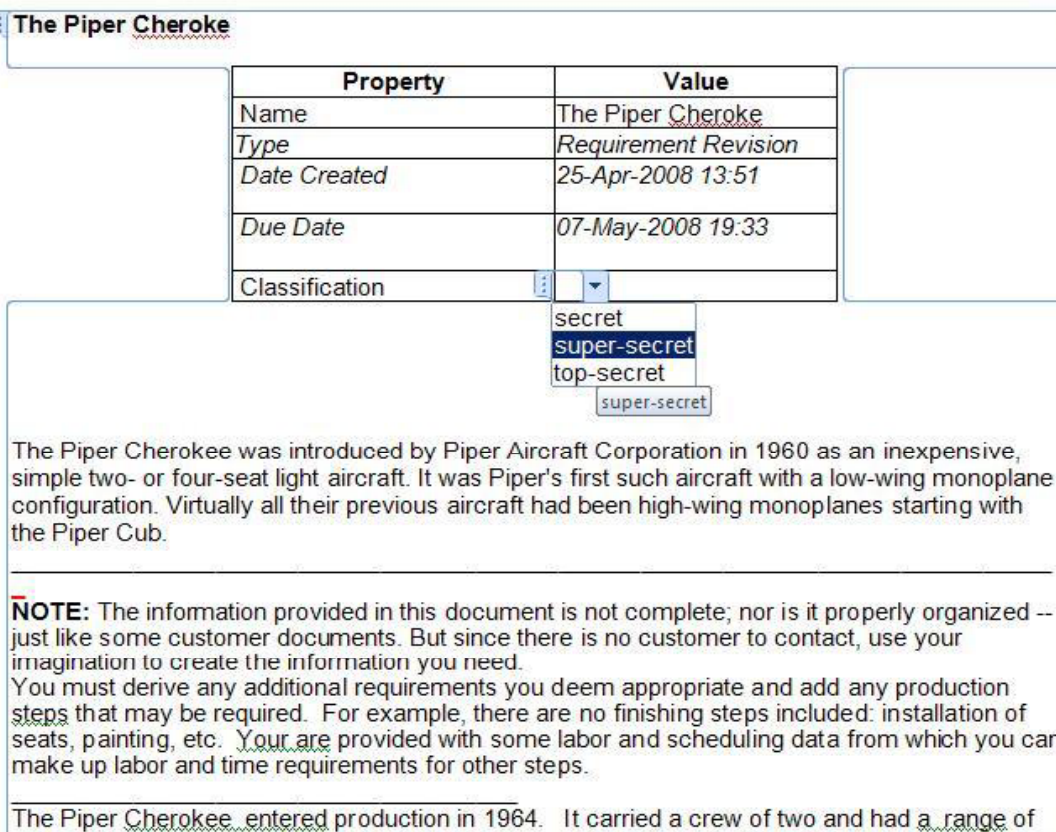
**The Piper Cherokee**

| Property       | Value                |
|----------------|----------------------|
| Name           | The Piper Cherokee   |
| Type           | Requirement Revision |
| Date Created   | 25-Apr-2008 13:51    |
| Due Date       | 07-May-2008 19:38    |
| Classification | super                |

The Piper Cherokee was introduced by Piper Aircraft Co. as an inexpensive, simple two- or four-seat light aircraft. It was Piper's first low-wing monoplane configuration. Virtually all their previous aircraft had been high-wing monoplanes starting with the Piper Cub.

**NOTE:** The information provided in this document is not complete; nor is it properly organized -- just like some customer documents. But since there is no customer to contact, use your imagination to create the information you need. You must derive any additional requirements you deem appropriate and add any production steps that may be required. For example, there are no finishing steps included: installation of seats, painting, etc. You are provided with some labor and scheduling data from which you can make up labor and time requirements for other steps.

The Piper Cherokee entered production in 1964. It carried a crew of two and had a range of 1100 miles. The Cherokee was the first of a series of light aircraft designed by Piper.



## Specification Template

- Specification Template is defined for the export of overall specification
- This template defines what objects to be exported
  - Users can choose to export the entire structure
  - Users can dynamically generate the structure using “**Closure Rules**”
- What style to be applied to generated document. If user does not specify spec template then default spec template is applied.





{%object\_name}  
SDLC Item ID: 007932

| Rev | Date             | Name           | Comment |
|-----|------------------|----------------|---------|
| A   | {%creation_date} | {%owning_user} | Initial |

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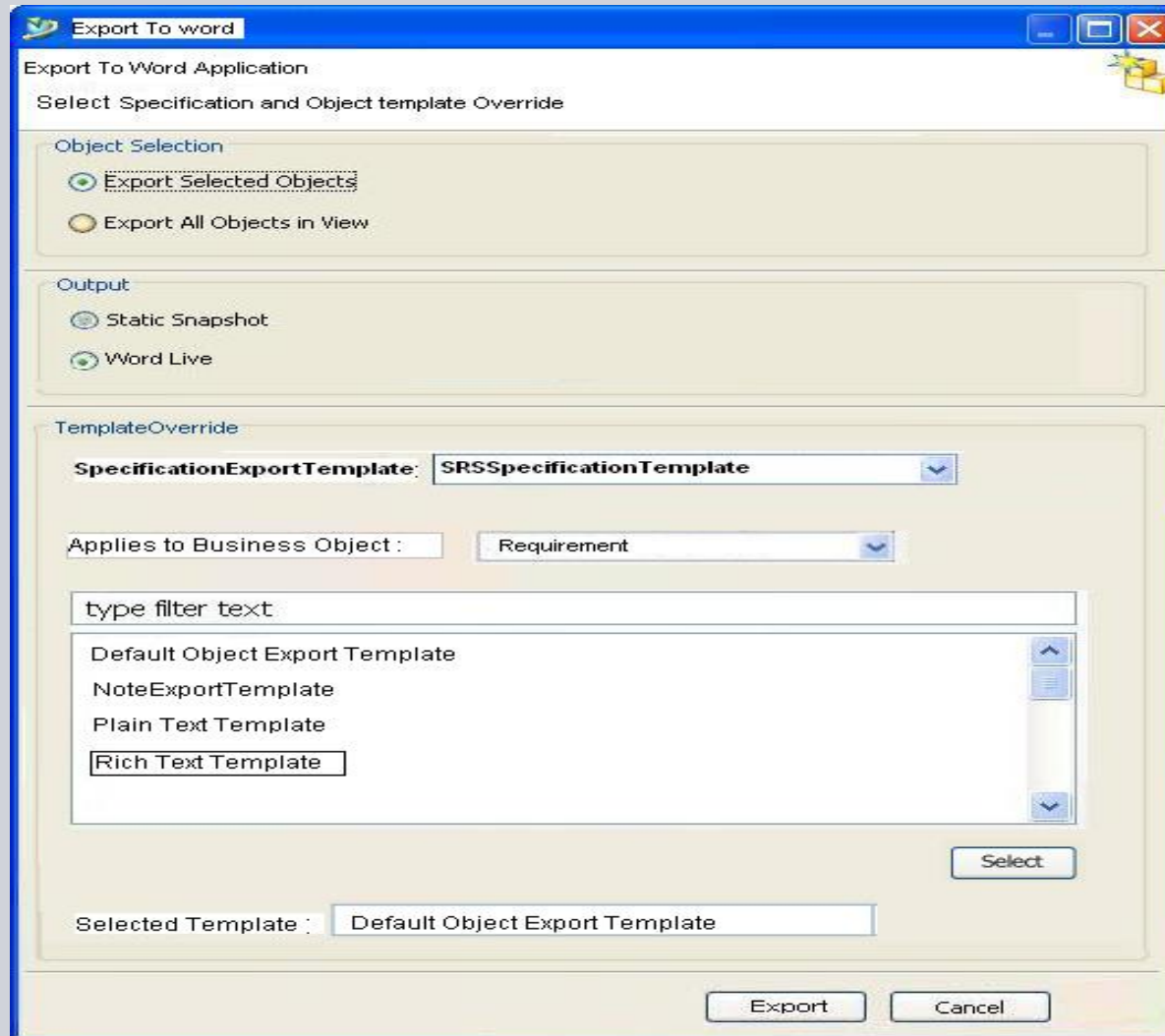
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```
{%Rule:Selection.Export.TM.MyTransferMode}
```

# Generate Document from Template





| Rev | Date                 | Name              | Comment |
|-----|----------------------|-------------------|---------|
| A   | 25-Apr-2008<br>13:51 | vinayak (vinayak) | Initial |

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- 1 Introduction
- 2 Market Challenges

**2.1 Untrustworthy Requirement Specifications**

**2.2 Content Changes not Resolved with Product Requirements**

**2.3 Capturing and Delivering the Voice of the Customer (VOC)**

## The Piper Cherokee

| Property       | Value                |
|----------------|----------------------|
| Name           | The Piper Cherokee   |
| Type           | Requirement Revision |
| Date Created   | 25-Apr-2008 13:51    |
| Due Date       | 07-May-2008 19:33    |
| Classification | super-secret         |

The Piper Cherokee was introduced by Piper Aircraft Corporation in 1960 as an inexpensive, simple two- or four-seat light aircraft. It was Piper's first such aircraft with a low-wing monoplane configuration. Virtually all their

## Saving Content from Word

- When “Live” Document is generated from Teamcenter, the object id and property tags are placed in Microsoft Word
- When user edits property values in Microsoft Word, the .NET addin in Microsoft Word keeps track of what properties are modified
- When user saves the “Live” Document, it is imported into Teamcenter
- Teamcenter server parses the Word Document, identifies the list of properties modified and updates them in the database

# Dynamic Structure Generation

Requirement Structure can be **dynamically** generated

- Structure can be generated from a Template using **Transfer Mode**
  - Example : Below transfer mode tells to traverse tracelink relation to selected object and process linked object. Also, it tells to skip Paragraph objects and process requirement objects. Other end of the object becomes child of selected object.

Traversal Rule Name:  \*

Description:

Scope of Traversal: ☒ Export ☐ Import

Output Schema Format:  ▼

| Primary Ob... | Primary Object       | Secondary ... | Secondary Object     | Relation Type | Related Property ... | Action Type | Conditional Clause |
|---------------|----------------------|---------------|----------------------|---------------|----------------------|-------------|--------------------|
| TYPE          | BOMLine              | TYPE          | Paragraph Revision   | PROPERTY      | bl_revision          | SKIP        |                    |
| TYPE          | BOMLine              | TYPE          | Requirement Revision | PROPERTY      | bl_revision          | PROCESS     |                    |
| TYPE          | Requirement Revision | TYPE          | TraceLink            | REFBY         | source_object_list   | PROCESS     |                    |
| TYPE          | Paragraph Revision   | TYPE          | TraceLink            | REFBY         | source_object_list   | PROCESS     |                    |
| TYPE          | BOMLine              | TYPE          | *                    | PROPERTY      | bl_revision          | PROCESS     |                    |
| TYPE          | TraceLink            | CLASS         | ItemRevision         | ATTRIBUTE     | target_object_list   | PROCESS     |                    |

# Dynamic Generation of Documents

- Structure can be generated using conditional clause specified in Transfer Mode
- Example : In the below transfer mode , those use cases revision objects will be processed whose owning user is “krishnan”

Traversal Rule Name:  \*

Description:

Scope of Traversal: ☒ Export ☐ Import

Output Schema Format:

| Primary O... | Primary Object       | Second... | Secondary Object     | Relation Type | Related Propert... | Action Type | Conditional Clause                |
|--------------|----------------------|-----------|----------------------|---------------|--------------------|-------------|-----------------------------------|
| TYPE         | BOMLine              | TYPE      | Paragraph Revision   | PROPERTY      | bl_revision        | SKIP        |                                   |
| TYPE         | BOMLine              | TYPE      | Requirement Revision | PROPERTY      | bl_revision        | PROCESS     |                                   |
| TYPE         | Requirement Revision | TYPE      | TraceLink            | REFBY         | source_object_list | PROCESS     |                                   |
| TYPE         | Paragraph Revision   | TYPE      | TraceLink            | REFBY         | source_object_list | PROCESS     |                                   |
| TYPE         | BOMLine              | TYPE      | *                    | PROPERTY      | bl_revision        | PROCESS     |                                   |
| TYPE         | TraceLink            | CLASS     | UseCaseRevision      | ATTRIBUTE     | target_object_list | PROCESS     | SECONDARY.owning_user=="Krishnan" |

## Contact

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